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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,029	05/10/2001	Masaya Kojima	N9450.0015/P015	4631
24998	7590	10/05/2004	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP			CHOI, LING SIU	
2101 L STREET NW			ART UNIT	
WASHINGTON, DC 20037-1526			PAPER NUMBER	

1713

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/852,029

Applicant(s)

KOJIMA ET AL.

Examiner

Ling-Siu Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/10/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathies et al. (US 5,274,240) in view of Karger et al. (US 5,085,757).

The present invention relates to a capillary array electrophoresis apparatus comprising

means for supplying an object sample into capillaries	
means for supplying an electrophoresis medium into the capillaries	
means for irradiating light beam to the object sample in the capillary array at the outside space of a thermostatic oven and for irradiating the same at the same time to the adjacent capillaries through a lens action of the capillaries, wherein	
the thermostatic oven	includes a space and can accommodate a plurality capillary arrays of different length exchangeably
	means for controlling the temperature of the thermostatic oven
means for detecting fluorescence caused by the irradiation	

(summary of claim 1)

Mathies et al. disclose a laser-excited capillary array comprising a plurality of side-by-side capillary passages disposed in a plane of a detection area, a source of radiant energy, an objective lens for receiving and focusing the radiant energy at an excitation volume in the plane of the plurality of side-by-side capillary passages, means for moving the plurality of side-by-side capillary passages, a detection system, and computer means for receiving and processing the signal from the plurality of side-by-side capillary passages, wherein the plurality of capillaries may be separated for individual manipulation and loading and the detection window is prepared by burning off the polyimide coating of the capillary in the detection area (col. 5, lines 15-25; col. 6, lines 9-14; claim 1; Fig. 1).

The difference between the present claims and the disclosure of Mathies et al. is the requirement of a thermostatic oven to be used for the capillary array in the present claims.

Karger et al. disclose an integrated temperature control/alignment system for high performance capillary electrophoretic apparatus, the system comprising (1) means for thermoelectrically regulating heat transfer between the capillary column and the ambient environment to maintain the capillary column at a predetermined electrophoretic operating temperature, (b) means for mounting the capillary column in a predetermined position as part of the capillary electrophoretic apparatus, which is formed from an electrically insulative, high thermally conductive material, and is configured to envelope the working length of the capillary column, and (c) means for monitoring the predetermined electrophoretic operating temperature of the capillary column, which is

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disposed in direct thermal contact with the capillary column and is electronically interfaced with the thermoelectric controller to provide temperature signals to the means for thermoelectric regulating heat transfer (claims 1-2 and 11). Karger et al. further disclose that "column temperature directly affects electrophoretic separation since there is a variation in mobility of about 2% / °C " (col. 2, lines 19-24). In light of such benefit, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the the temperature of capillary array in the disclosure of Mathies et al. and thereby obtain the present invention.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098. The examiner can normally be reached on Monday to Friday.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

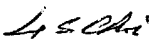
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic,

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Business Center (EBC) at 866-217-9197 (toll-free).


LING-SUI CHOI
PRIMARY EXAMINER

Ling -Siu Choi, Ph.D.

September 27, 2004